GENERAL INFORMATION

Your Ford or Lincoln authorized dealer has many quality products available to clean your vehicle and protect its finishes.

CLEANING PRODUCTS

For best results, use the following products or products of equivalent quality:

Motorcraft Bug and Tar Remover (ZC-42)

Motorcraft Custom Bright Metal Cleaner (ZC-15)

Motorcraft Detail Wash (ZC-3-A)

Motorcraft Dusting Cloth (ZC-24)

Motorcraft Engine Shampoo and Degreaser (United States only) (ZC-20)

Motorcraft Engine Shampoo (Canada only) (CXC-66-A)

Motorcraft Multi-Purpose Cleaner (Canada only) (CXC-101)

Motorcraft Premium Glass Cleaner (Canada only) (CXC-100)

Motorcraft Premium Quality Windshield Washer Fluid (Canada only) [CXC-37-(A, B, D or F)]

Motorcraft Premium Windshield Wash Concentrate with Bitterant (United States only) ZC-32-B1)

Motorcraft Professional Strength Carpet & Upholstery Cleaner (ZC-54)

Motorcraft Spot and Stain Remover (United States only) (ZC-14)

Motorcraft Ultra-Clear Spray Glass Cleaner (ZC-23)

Motorcraft Wheel and Tire Cleaner (ZC-37-A)

CLEANING THE EXTERIOR

Wash your vehicle regularly with cool or lukewarm water and a neutral pH shampoo, such as Motorcraft® Detail Wash.

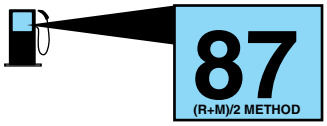
Choosing the Right Fuel With a Flex Fuel Vehicle (If Equipped)

Use only UNLEADED gasoline or UNLEADED gasoline blended with a maximum of 85% ethanol (E-85) in your Flex Fuel Vehicle (FFV). If your vehicle is flex fuel capable, it will have a yellow bezel placed over the fuel fill inlet.

Do not use:

- Fuels containing more than 85% ethanol or E-100 fuel.
- Fuels containing methanol.
- Fuels containing metallic based additives, including manganese-based compounds.
- Fuels containing the octane booster additive, methylcyclopentadienyl manganese tricarbonyl (MMT).
- Leaded-fuel (The use of leaded fuel is prohibited by law).

Octane recommendations



- 3.5L V6 SHO engine

"Regular" unleaded gasoline with a pump (R+M)/2 octane rating of 87 is recommended. Some stations offer fuels posted as "Regular" with an octane rating below 87, particularly in high altitude areas. Fuels with octane levels below 87 are not recommended. Premium fuel will provide improved performance and is recommended for severe duty usage such as trailer tow.

Do not be concerned if your engine sometimes knocks lightly. However, if it knocks heavily while you are using fuel with the recommended octane rating, see your authorized dealer to prevent any engine damage.

Replacing supplemental park lamp bulbs

Your vehicle is equipped with an LED supplemental park lamp. It is designed to last the life of the vehicle. If replacement is required, it is recommended that you see your authorized dealer.

BULB SPECIFICATION CHART

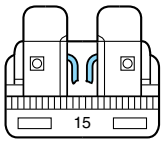
Replacement bulbs are specified in the chart below. Headlamp bulbs must be marked with an authorized “D.O.T.” for North America and an “E” for Europe to ensure lamp performance, light brightness and pattern and safe visibility. The correct bulbs will not damage the lamp assembly or void the lamp assembly warranty and will provide quality bulb burn time.

Function	Number of bulbs	Trade number
Low series low/high beam headlamp	2	HIR2
* High series Low/high beam headlamp (HID)	2	D3S
Front park/turn lamp	2	3457AK (amber)
Sidemarker lamp (front)	2	194NA
* Sidemarker lamp (rear)	2	LED
* Tail/brake lamp	2	LED
* Rear turn lamp	2	LED
Backup lamp	2	921
License plate lamp	2	C5W
* High-mount brake lamp	1	LED
* Supplemental park lamp	2	LED
Map lamp	2	W5WL
Dome/reading lamps	2	W5WL
All replacement bulbs are clear in color except where noted.		
To replace all instrument panel lights - see your authorized dealer.		
* To replace these lights - see your authorized dealer.		

CHANGING A FUSE

Fuses

WARNING: Always replace a fuse with one that has the specified amperage rating. Using a fuse with a higher amperage rating can cause severe wire damage and could start a fire.



If electrical components in your vehicle are not working, a fuse may have blown. Blown fuses are identified by a broken wire within the fuse. Check the appropriate fuses before replacing any electrical components.

Standard Fuse Amperage Rating and Color

COLOR					
Fuse rating	**Mini fuses**	**Standard fuses**	**Maxi fuses**	**Cartridge maxi fuses**	**Fuse link cartridge**
2A	Grey	Grey	—	—	—
3A	Violet	Violet	—	—	—
4A	Pink	Pink	—	—	—
5A	Tan	Tan	—	—	—
7.5A	Brown	Brown	—	—	—
10A	Red	Red	—	—	—
15A	Blue	Blue	—	—	—
20A	Yellow	Yellow	Yellow	Blue	Blue
25A	Natural	Natural	—	Natural	Natural
30A	Green	Green	Green	Pink	Pink
40A	—	—	Orange	Green	Green
50A	—	—	Red	Red	Red
60A	—	—	Blue	Yellow	Yellow
70A	—	—	Tan	—	Brown
80A	—	—	Natural	Black	Black

FUSE SPECIFICATION CHART

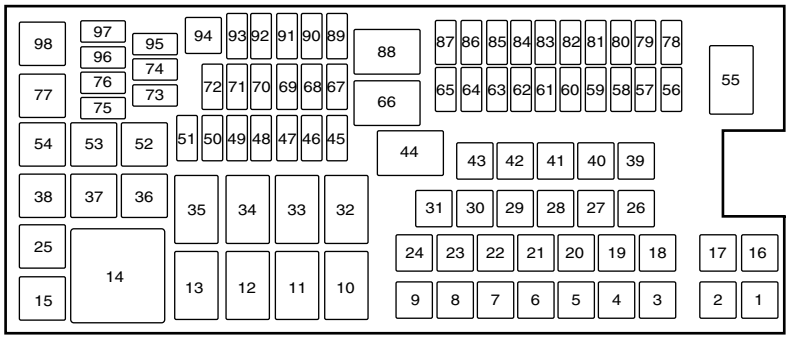
Power Distribution Box

WARNING: Always disconnect the battery before servicing high current fuses.

WARNING: To reduce risk of electrical shock, always replace the cover to the power distribution box before reconnecting the battery or refilling fluid reservoirs.

The power distribution box is located in the engine compartment. It has high-current fuses that protect your vehicle's main electrical systems from overloads.

If the battery has been disconnected and reconnected, see *Changing the Vehicle Battery* in the *Maintenance* chapter.



The high-current fuses are coded as follows:

Fuse or relay number	Fuse amp rating	Protected components
1	—	Not used
2	—	Not used
3	—	Not used

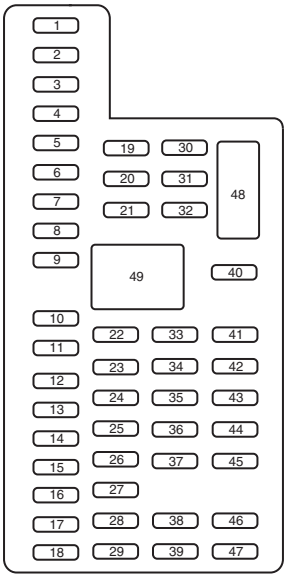
Fuse or relay number	Fuse amp rating	Protected components
4	30A**	Wiper motor relay
5	50A**	Anti-lock brake system pump
6	—	Not used
7	—	Not used
8	20A**	Moonroof, Power sunshade
9	20A**	Second row powerpoint
10	—	Not used
11	—	Heated rear window relay
12	—	Not used
13	—	Starter motor high-current relay
14	—	Left-hand cooling fan #2 relay
15	—	Fuel pump ultra relay
16	—	Not used
17	—	Not used
18	40A**	Front blower motor relay
19	30A**	Starter relay
20	20A**	Storage bin powerpoint
21	20A**	Rear heated seat module
22	—	Not used
23	30A**	Driver power seat, Memory module
24	—	Not used
25	—	Not used
26	40A**	Rear window defrost relay
27	20A**	Cigar lighter
28	30A**	Climate controlled seats
29	40A**	Electric fan relay 1
30	40A**	Electric fan relay 2
31	25A**	Electric fan relay 3
32	—	Not used
33	—	Right-hand cooling fan relay

Fuse or relay number	Fuse amp rating	Protected components
34	—	Blower motor high-current relay
35	—	Left-hand cooling fan #1 relay
36	—	Not used
37	—	Not used
38	—	Not used
39	—	Not used
40	—	Not used
41	—	Not used
42	30A**	Passenger power seat
43	20A**	Anti-lock brake system valves
44	—	Not used
45	5A*	Rain sensor
46	—	Not used
47	—	Not used
48	—	Not used
49	—	Not used
50	15A*	Heated mirrors
51	—	Not used
52	—	Not used
53	—	Not used
54	—	Not used
55	—	Wiper relay
56	—	Not used
57	20A*	Left high-intensity discharge headlamp
58	10A*	Alternator A-line
59	10A*	Brake on/off switch
60	—	Not used
61	—	Not used
62	10A*	A/C clutch relay

Fuse or relay number	Fuse amp rating	Protected components
63	—	Not used
64	—	Not used
65	30A*	Fuel pump relay, Fuel injectors
66	—	Powertrain control module relay
67	20A*	Oxygen sensor heater, Mass airflow sensor, Variable camshaft timing solenoid valve, Canister vent solenoid, Canister purge solenoid
68	20A*	Ignition coils
69	20A*	Vehicle power #1 (powertrain control module)
70	15A*	A/C clutch, Fan control relay coils (1-3), Variable air conditioning compressor, Auxiliary transmission warmup, Turbo charge waste-gate control, Electronic compressor bypass valve, All-wheel drive module, Positive crankcase ventilation heater
71	—	Not used
72	—	Not used
73	—	Not used
74	—	Not used
75	—	Not used
76	—	Not used
77	—	Not used
78	20A*	Right high-intensity discharge headlamp
79	5A*	Adaptive cruise control module

Fuse or relay number	Fuse amp rating	Protected components
80	—	Not used
81	—	Not used
82	—	Not used
83	—	Not used
84	—	Not used
85	—	Not used
86	7.5A*	Powertrain control module keep-alive power and relay, Canister vent solenoid
87	5A*	Run/start relay
88	—	Run/start relay
89	5A*	Front blower relay coil, Electrical power assist steering module
90	10A*	Powertrain control module run/start
91	10A*	Adaptive cruise control module
92	10A*	Anti-lock brake system module, Adaptive headlamp module
93	5A*	Rear window defroster relay
94	30A**	Passenger compartment fuse panel run/start
95	—	Not used
96	—	Not used
97	—	Not used
98	—	A/C clutch relay
*Mini Fuses **Cartridge Fuses		

Passenger Compartment Fuse Panel



The fuse panel is located under the instrument panel to the left of the steering wheel. You may need to remove a trim panel to access it.

The fuses are coded as follows.

Fuse or relay number	Fuse amp rating	Protected components
1	30A	Left front and right rear smart window motors
2	15A	Driver seat switch power
3	30A	Right front smart window motor
4	10A	Demand lamps battery saver relay and coil
5	20A	Audio amplifiers
6	5A	Not used (spare)
7	7.5A	Driver seat module logic, Left front door zone module, Keypad

Fuse or relay number	Fuse amp rating	Protected components
8	10A	Not used (spare)
9	10A	SYNC module, Multi-function displays, Electronic finish panel, Radio frequency transceiver module
10	10A	Run accessory relay
11	10A	Intelligent access module logic, Heads-up display
12	15A	Puddle lamp, Backlighting LED, Interior lighting
13	15A	Right front turn, Right rear turn
14	15A	Left front turn, Left rear turn
15	15A	Stop lamp, Backup lamp
16	10A	Right front low beam
17	10A	Left front low beam
18	10A	Start button, Keypad illumination, Brake shift interlock, Powertrain control module wakeup, Immobilizer transceiver module
19	20A	Audio amplifier
20	20A	All lock motor relay, Driver lock motor relay
21	10A	Not used (spare)
22	20A	Horn relay
23	15A	Steering wheel control module logic, Instrument cluster
24	15A	Steering wheel control module, Datalink
25	15A	Decklid release relay
26	5A	Ignition switch or push button start switch
27	20A	Intelligent access module power
28	15A	Not used (spare)

Fuse or relay number	Fuse amp rating	Protected components
29	20A	Radio, Global positioning system module
30	15A	Front park lamps
31	5A	Not used (spare)
32	15A	Smart window motors, Master window and mirror switch, Rear window power sunshade module, Lock switch illumination
33	10A	Not used (spare)
34	10A	Reverse park aid module, Automatic high beam and lane departure module, Rear heated seat module, Blind spot monitor module, Rear video camera
35	5A	Motorized humidity sensor, Heads-up display, Traction control switch
36	10A	Heated steering wheel
37	10A	Not used (spare)
38	10A	Auto–dimming mirror (without automatic high beam and lane departure module), Moonroof module and switch
39	15A	High beams
40	10A	Rear park lamps
41	7.5A	Occupant classification sensor, Restraint control module
42	5A	Not used (spare)
43	10A	Not used (spare)
44	10A	Not used (spare)
45	5A	Not used (spare)
46	10A	Climate control module
47	15A	Fog lamp relay
48	30A Circuit Breaker	Front passenger power window, Rear power windows

The sealant canister should be replaced after four years.

TECHNICAL SPECIFICATIONS

Wheel Lug Nut Torque Specifications

WARNING: When a wheel is installed, always remove any corrosion, dirt or foreign materials present on the mounting surfaces of the wheel or the surface of the wheel hub, brake drum or brake disc that contacts the wheel. Make sure that any fasteners that attach the rotor to the hub are secured so they do not interfere with the mounting surfaces of the wheel. Installing wheels without correct metal-to-metal contact at the wheel mounting surfaces can cause the wheel nuts to loosen and the wheel to come off while your vehicle is in motion, resulting in loss of control.

Retighten the lug nuts to the specified torque within 100 miles (160 kilometers) after any wheel disturbance (such as rotation, flat tire, wheel removal).

Lug nut socket size/Bolt size	Wheel lug nut torque*	
	ft-lb	N•m
½ x 20	100	135

* Torque specifications are for nut and bolt threads free of dirt and rust. Use only Ford recommended replacement fasteners.

Note: Inspect the wheel pilot hole and mounting surface prior to installation. Remove any visible corrosion or loose particles.

ENGINE SPECIFICATIONS

Engine	3.5L V6 engine	3.5L V6 SHO engine	2.0L EcoBoost engine
Cubic inches	214	214	122
Required fuel	See *Octane recommendations* in the Fuel and Refueling chapter.		
Firing order	1–4–2–5–3–6	1–4–2–5–3–6	1-3-4-2
Ignition system	Coil on plug	Coil on plug	Coil on plug
Spark plug gap	0.049-0.053 in. (1.25-1.35 mm)	0.033–0.037 in. (0.84–0.94 mm)	0.027–0.031 in. (0.70–0 .80 mm)
Compression ratio	10.8:1	10.0:1	9.3:1

3.5L V6 SHO engine:

TECHNICAL SPECIFICATIONS

Items	Capacity	Ford part name or equivalent	Ford part number / Ford specification
Brake fluid[1]	Between MAX and MIN on reservoir	Motorcraft DOT 4 LV High Performance Motor Vehicle Brake Fluid	PM-20 / WSS-M6C65-A2
Door latch, hood latch, auxiliary hood latch, seat tracks, trunk and liftgate latches	—	Multi-Purpose Grease (Lithium grease)	Motorcraft XL-5 (aerosol) Multi-Purpose Grease ESA-M1C93-B / CRC Multi-Purpose Grease SL3151
Lock cylinders	—	Motorcraft Penetrating and Lock Lubricant	XL-1 / None
Automatic transmission fluid [2,3]	10.9 quarts (10.3L) (6F50)	Motorcraft MERCON LV ATF[2]	XT-10-QLV / MERCON LV
	11.6 quarts (11.0L) (6F55)		
	9.0 quarts (8.5L) (6F35)		

Items	Capacity	Ford part name or equivalent	Ford part number / Ford specification
Rear differential (All Wheel Drive) fluid	2.4 pints (1.15L)	Motorcraft SAE 80W-90 Premium Rear Axle Lubricant	XY-80W90-QL / WSP-M2C197-A
Power Transfer Unit (PTU) fluid (All Wheel Drive)[4]	18 ounces (0.53L)	Motorcraft SAE 75W-140 Synthetic Rear Axle Lubricant	XY-75W140-QL / WSL-M2C192-A
Engine oil[5,6,7]	3.5L V6 engine 6.0 quarts (5.7L)	Motorcraft SAE 5W-20 Motor Oil or equivalent	WSS-M2C945-A
	3.5L V6 Super High Output (SHO) engine 6.0 quarts (5.7L)	Motorcraft SAE 5W-30 Motor Oil or equivalent	WSS-M2C946-A
	2.0L EcoBoost engine 5.7 quarts (5.4L)	Motorcraft SAE 5W-30 Motor Oil or equivalent	WSS-M2C946-A

Items	Capacity	Ford part name or equivalent	Ford part number / Ford specification
Engine coolant[8]	3.5L V6 engine 11.1 quarts (10.5L)	Motorcraft Orange Antifreeze/ Coolant Prediluted (retired) Motorcraft Yellow Antifreeze/ Coolant Prediluted	VC-3DIL-B (US); /WSS-M97B44-D2 VC-13DL-G (US); /WSS-M97B57-A2
	3.5L V6 Super High Output (SHO) engine 11.4 quarts (10.8L)		
	2.0L EcoBoost engine 11.6 quarts (11.0L)		
Fuel tank	19.0 gallons (71.9 L)	—	—

Items	Capacity	Ford part name or equivalent	Ford part number / Ford specification
Windshield washer fluid	Fill as required	Motorcraft Premium Windshield Washer Concentrate with Bitterant (US); Premium Quality Windshield Washer Fluid (Canada)	ZC-32-A1 or ZC-32-B1 (US;) CXC-37-(A, B, D, and F) (Canada) / WSB-M8B16-A2/- -
A/C Refrigerant Capacity[9]	2.0LEcoBoost engine 1.62 lb (0.74kg) 3.5L V6 engine 1.43 lb (0.65kg)	Motorcraft R–134a Refrigerant	YN-19 (US); CYN16–R (Canada) /WSH-M17B19–A
A/C Refrigerant Compressor Oil[9]	2.0L GTDI & 3.5LTiVCT 5.2 fl oz (0.153 L)	Motorcraft PAG Refrigerant Compressor Oil	YN-12–D WSH-M1C231–B
[1]Ford recommends using Motorcraft (Ford) DOT 4 LV High Performance Brake Fluid or equivalent meeting WSS-M6C65-A2. Use of any fluid other than the recommended fluid may cause degraded brake performance and not meet the Ford performance standards. Keep brake fluid clean and dry. Contamination with dirt, water, petroleum products or other materials may result in brake system damage and possible failure.			
[2]Approximate dry fill capacity. Actual amount may vary during fluid changes.			

[3]Automatic transmissions that require MERCON LV should only use MERCON LV fluid. Refer to *scheduled maintenance information* to determine the correct service interval. Use of any fluid other than the recommended fluid may cause transmission damage.
[4]See your authorized dealer for fluid level checking or filling.
[5]Your engine has been designed to use Motorcraft engine oils or equivalent oils that meet Ford specifications. It is also acceptable to use an engine oil of recommended viscosity grade that meets API SN requirements and displays the API Certification Mark for gasoline engines.
[6]Do not use supplemental engine oil additives in your engine. They are unnecessary and could lead to engine damage that is not covered by Ford's warranty.
[7]Do not use API S category oils labeled as SN, SM, SL or lower category unless the label also display the API certification mark. These oils do not meet the requirements of the engine and emission systems.
[8]Add the coolant type originally equipped in your vehicle.
[9]**Warning:**The air conditioning refrigerant system contains refrigerant R134A under high pressure. Opening the air conditioning refrigerant system can cause personal injury. Air conditioning refrigerant system is to be serviced only by qualified personnel.

MOTORCRAFT® PART NUMBERS

Component	3.5L V6 engine	3.5L V6 SHO engine	2.0L EcoBoost engine
Air filter element	FA-1884	FA-1884	FA-1884
Oil filter	FL-500-S	FL-500-S	FL-910-S
Battery	BXT-59	BXT-65-650	BXT-65-650
Spark plugs	SP-534[1]	SP-580-X[1]	SP-527[1]
Cabin air filter	FP68	FP68	FP68
Seat air filter	FS-104		
Windshield wiper blade (Utility)	WW-2206-PF (driver side) WW-2601-PF (passenger side) WW1106 (rear)		
Windshield wiper blade (Sedan)	WW-2501 (driver side) WW-2043 (passenger side)		

[1] Refer to *scheduled maintenance information* for the appropriate intervals for changing the spark plugs. SP-534 was retired.

Note: Replace the spark plugs with ones that meet Ford material and design specifications for your vehicle, such as Motorcraft® or equivalent replacement parts. The customer warranty may be void for any damage to the engine if such spark plugs are not used.

Additives and Chemicals

Ford Motor Company recommended additives and chemicals are listed in the owner manual and in the Ford Workshop Manual. Additional chemicals or additives not approved by Ford Motor Company are not recommended as part of normal maintenance. Please consult your warranty information.

Oils, Fluids and Flushing

In many cases, fluid discoloration is a normal operating characteristic and, by itself, does not necessarily indicate a concern or that the fluid needs to be changed. However, discolored fluids that also show signs of overheating and foreign material contamination should be inspected immediately by a qualified expert, such as the factory-trained technicians at your dealership. Your vehicle's oils and fluids should be changed at the specified intervals or in conjunction with a repair. Flushing is a viable way to change fluid for many vehicle sub-systems during scheduled maintenance. It is critical that systems are flushed only with new fluid that is the same as that required to fill and operate the system, or using a Ford-approved flushing chemical.

Owner Checks and Services

Certain basic maintenance checks and inspections should be performed every month or at six month intervals.

Check every month
Engine oil level.
Function of all interior and exterior lights.
Tires (including spare) for wear and proper pressure.
Windshield washer fluid level.

Check every six months
Battery connections. Clean if necessary.
Body and door drain holes for obstructions. Clean if necessary.
Cooling system fluid level and coolant strength.
Door weatherstrips for wear. Lubricate if necessary.
Hinges, latches and outside locks for proper operation. Lubricate if necessary.
Parking brake for proper operation.

Check every six months
Safety belts and seat latches for wear and function.
Safety warning lamps (brake, ABS, airbag, safety belt) for operation.
Washer spray and wiper operation. Clean or replace blades as necessary.

Multi-point Inspection

In order to keep your vehicle running right, it is important to have the systems on your vehicle checked regularly. This can help identify potential issues and prevent major problems. Ford Motor Company recommends the following multi-point inspection be performed at every scheduled maintenance interval to help make sure your vehicle keeps running great.

Multi-point Inspection	
Accessory drive belt(s)	Half-shaft dust boots (if equipped)
Battery performance	Horn operation
Clutch operation (if equipped)	Radiator, cooler, heater and A/C hoses
Engine air filter	Suspension component for leaks or damage
Exhaust system	Steering and linkage
Exterior lamps and hazard warning system operation	Tires (including spare) for wear and proper pressure**
Fluid levels*; fill if necessary	Windshield for cracks, chips or pits
For oil and fluid leaks	Washer spray and wiper operation

*Brake, coolant recovery reservoir, manual and automatic transmission (with an underhood dipstick), power steering (if equipped) and window washer

**If your vehicle is equipped with a temporary mobility kit, check the tire sealant expiration Use By date on the canister. Replace as needed.

Be sure to ask your dealership service advisor or technician about the multi-point vehicle inspection. It's a comprehensive way to perform a thorough inspection of your vehicle. It's your checklist that gives you immediate feedback on the overall condition of your vehicle. You'll know what's been checked, what's okay, as well as those things that may require future or immediate attention. The multi-point vehicle inspection is one more way to keep your vehicle running great!

When to expect the OIL CHANGE REQUIRED message	
Interval	**Vehicle use and examples**
7500-10000 miles (12000-16000 km)	**Normal**
	– Normal commuting with highway driving – No, or moderate, load or towing – Flat to moderately hilly roads – No extended idling
5000-7499 miles (8000-11999 km)	**Severe**
	– Moderate to heavy load or towing – Mountainous or off-road conditions – Extended idling – Extended hot or cold operation
3000-4999 miles (4800-7999 km)	**Extreme**
	– Maximum load or towing – Extreme hot or cold operation

Normal scheduled maintenance*	
At every oil change interval as indicated by the information display	Change engine oil and filter.**
	Rotate tires, inspect tire wear and measure tread depth.
	Perform multi-point inspection (recommended).
	Inspect automatic transmission fluid level (if equipped with dipstick). Consult dealer for requirements.
	Inspect brake pads, shoes, rotors, drums, brake linings, hoses and parking brake.
	Inspect engine cooling system strength and hoses.
	Inspect exhaust system and heat shields.
	Inspect rear axle and U-joints. Lubricate if equipped with grease fittings (All-wheel drive vehicles).
	Inspect half-shaft boots (if equipped).
	Inspect steering linkage, ball joints, suspension, tie-rod ends, driveshaft and U-joints. Lubricate if equipped with grease fittings.
	Inspect wheels and related components for abnormal noise, wear, looseness or drag.

*Do not exceed one year or 10000 miles (16000 kilometers) between service intervals.

**Reset your Intelligent Oil-Life Monitor after each engine oil and filter change. See the *Instrument Cluster* chapter.

Other maintenance items[1]	
Every 20000 miles (32000 km)	Replace cabin air filter (if equipped).
Every 30000 miles (48000 km)	Replace climate-controlled (heated and cooled) seat filter[2].
	Replace engine air filter.
At 100000 miles (160000 km)	Change engine coolant.[3]
Every 100000 miles (160000 km)	Replace spark plugs.
	Inspect accessory drive belt(s).[4]
Every 150000 miles (240000 km)	Change automatic transmission fluid.
	Replace accessory drive belt(s) if not replaced within the last 100000 miles (160000 km).

[1]These maintenance items can be performed within 3000 miles (4800 kilometers) of the last oil change. Do not exceed the designated distance for the interval.

[2]If your vehicle has climate-controlled (heated and cooled) seats.

[3]Initial replacement at six years or 100000 miles (160000 kilometers), then every three years or 50000 miles (80000 kilometers).

[4]After initial inspection, inspect every other oil change until replaced.

SPECIAL OPERATING CONDITIONS

If you operate your vehicle **primarily** in any of the following conditions, you need to perform additional maintenance as indicated. If you **occasionally** operate your vehicle under any of these conditions, it is not necessary to perform the additional maintenance. For specific recommendations, see your dealership service advisor or technician.

Perform the services shown in the following tables when specified or within 3000 miles (4800 kilometers) of the OIL CHANGE REQUIRED message appearing in the information display.

Example #1: The OIL CHANGE REQUIRED message comes on at 28751 miles (46270 kilometers); perform the 30000 mile (48000 kilometer) automatic transmission fluid replacement.

Example #2: The OIL CHANGE REQUIRED message has **not** come on, but the odometer reads 30000 miles (48000 kilometers); perform the engine air filter replacement. (i.e., Intelligent Oil-Life Monitor was reset at 25000 miles [40000 kilometers].)

Towing a trailer or using a camper or car-top carrier	
As required	Change engine oil and filter as indicated by the information display and perform services listed in the Normal Scheduled Maintenance chart.
Inspect frequently, service as required	Inspect and lubricate U-joints.
	See axle maintenance items under *Exceptions*.
Every 30000 miles (48000 km)	Change automatic transmission fluid (except Focus).
Every 60000 miles (96000 km)	Change manual transmission fluid.

Extensive idling or low-speed driving for long distances as in heavy commercial use (such as delivery, taxi, patrol car or livery)	
As required	Change engine oil and filter as indicated by the information display and perform services listed in the Normal Scheduled Maintenance chart.
Inspect frequently, service as required	Replace cabin air filter (if equipped).
	Replace engine air filter.

Extensive idling or low-speed driving for long distances as in heavy commercial use (such as delivery, taxi, patrol car or livery)	
Every 30000 miles (48000 km)	Change automatic transmission fluid (except Focus).
Every 60000 miles (96000 km)	Replace spark plugs.

Operating in dusty or sandy conditions such as unpaved or dusty roads	
Inspect frequently, service as required	Replace cabin air filter (if equipped).
	Replace engine air filter.
Every 5000 miles (8000 km)	Inspect the wheels and related components for abnormal noise, wear, looseness or drag.
	Rotate tires, inspect tires for wear and measure tread depth.
Every 5000 miles (8000 km) or six months	Change engine oil and filter.*
	Perform multi-point inspection.
Every 30000 miles (48000 km)	Change automatic transmission fluid (except Focus).
Every 50000 miles (80000 km)	Change manual transmission fluid.

*Reset your Intelligent Oil-Life Monitor after each engine oil and filter change. See the *Instrument Cluster* chapter.

Exclusive use of E85 (flex fuel vehicles only)	
Every oil change	If ran exclusively on E85, fill the fuel tank full with regular unleaded fuel.

EXCEPTIONS

There are several exceptions to the Normal Schedule. They are listed below:

Normal vehicle axle maintenance: Rear axles and power take-off (PTO) units with synthetic fluid and light-duty trucks equipped with Ford-design axles are lubricated for life; do not check or change fluid unless a leak is suspected, service is required or the assembly has been submerged in water. During long periods of trailer towing with outside temperatures above 70°F (21°C) and at wide-open throttle for long periods above 45 mph (72 km/h), non-synthetic rear axle fluids should be changed every 3000 miles (4800 kilometers) or three months, whichever comes first. This interval can be waived if the axle is filled with 75W140 synthetic gear fluid meeting Ford specification WSL-M2C192-A, part number F1TZ-19580-B or equivalent. Add friction modifier XL-3 (EST-M2C118-A) or equivalent for complete refill of Traction-Lok rear axles (see *Technical specifications* in the *Capacities and Specifications* chapter for details).

Police/Taxi/Livery vehicle axle maintenance: Change rear axle fluid every 100000 miles (160000 kilometers). Rear axle fluid change may be waived if the axle was filled with 75W140 synthetic gear fluid meeting Ford specification WSL-M2C192-A, part number FITZ-19580-B or equivalent. Add four ounces (118 mL) of additive friction modifier XL-3 (EST-M2C118-A) or equivalent for complete refill of Traction-Lok rear axles. The axle fluid should be changed anytime the axle has been submerged in water.

California fuel filter replacement: If the vehicle is registered in California, the California Air Resources Board has determined that the failure to perform this maintenance item will not nullify the emission warranty or limit recall liability prior to the completion of the vehicle's useful life. Ford Motor Company, however, urges you to have all recommended maintenance services performed at the specified intervals and to record all vehicle service.

Class A Motorhome: Change brake fluid every two years.

Hot climate oil change intervals: Vehicles operating in the Middle East, North Africa, Sub-Saharan Africa or locations with similar climates using an American Petroleum Institute (API) Certified for Gasoline Engines (Certification mark) oil of SM or SN quality, the normal oil change interval is 5000 miles (8000 kilometers).
If the available API SM or SN oils are not available, then the oil change service interval is 3000 miles (4800 kilometers).

Edge/MKX AWD only: Vehicles operating off-road in sand during high ambient temperatures must replace the AWD PTU (All-wheel drive Power Transfer Unit) lube every 20000 miles (32000 kilometers).

Engine air filter & cabin air filter replacement: Engine air filter and cabin air filter life is dependent on exposure to dusty and dirty conditions. Vehicles operated in these conditions will require frequent inspection and replacement of the engine air filter and cabin air filter.

ENGINE COOLANT CHANGE RECORD

Initial change	Six years or 100000 miles (160000 km) (whichever comes first)
After initial change	Every three years or 50000 miles (80000 km)